

Subject: Mathematics

Grade: Sixth

Standard: #13 Technology and #12 Connections

Key Concept: Students use technology, computers and calculators, as tools to model patterns.

Generalization: Students create and use mathematical objects to make patterns.

Background:

Students have worked with number patterns and have observed patterns of geometric objects. This lesson would most likely be appropriate towards the end of the academic year. Within each tier, the teacher may choose to have the students work in pairs, triads, or quads.

This lesson is tiered in *content* according to *learning style*.

Tier I: ***Visual Learners***

Groups of students are given a picture from nature, wrapping paper, or other visual item which has a definite pattern. The students use the item to create the same pattern using numbers via the calculator or a new visual using the computer which conveys the same pattern. Students must write a one page justification of how and why the new item represents the same pattern found in the original item.

Tier II: ***Auditory Learners***

Groups of students are listen to a musical piece or song which has a definite pattern. The students use the item to create the same pattern using numbers via the calculator or a new visual using the computer which conveys the same pattern. Students must write a one page justification of how and why the new item represents the same pattern found in the original item.

Tier III: ***Kinesthetic Learners***

Students are given the steps for the cha-cha or rumba or some other dance which has a definite pattern. The students use the item to create the same pattern using numbers via the calculator or a new visual using the computer

which conveys the same pattern. Students must write a one page justification of how and why the new item represents the same pattern found in the original item.

Assessment:

This lesson is meant to be a fun way to consider patterns and provide extra practice working with numbers, geometric objects, calculators, and computers. Although an assessment is not necessary, you may want to grade the project based on the students abilities to work cooperatively and on originality and creativity via your own rubric.